

**REMARKS/ARGUMENTS**

This case has been carefully reviewed and analyzed in view of the Official Action dated 19 September 2006. Responsive to the Office Action, Claims 1 and 13 are amended for further prosecution with the other pending Claims. It is believed that with such amendment of Claims, there is a further clarification of the Claims' recitations.

In the Office Action, the Examiner rejected Claims 1-4 and 7-11 under 35 U.S.C. § 103(a) as being unpatentable over the Yamaguchi, et al. reference in view of the Gruenwald reference. In setting forth this rejection, the Examiner acknowledged that Yamaguchi, et al. fails to disclose a device for dispensing hydrogen and various aspects of the device but cited the Gruenwald reference for disclosing them, concluding that it would have been obvious to one of ordinary skill in the art for various reasons to have incorporated such features into the Yamaguchi, et al. system.

Additionally, the Examiner rejected Claims 5, 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over the Yamaguchi, et al. reference in view of the Gruenwald reference and further in view of the Foust reference. In setting forth this rejection, the Examiner cited the Foust reference for disclosing a pre-heater to heat the fuel supply line, a nozzle section, wherein the flow of air sucks in the fuel and atomizes it and the mixture of the fuel and air enters the combustion chamber and burns; wherein heat produced in the chamber heats the walls of the chamber

including the injection unit; and wherein the supply fuel line comes in a coiled pipe in and out of the injection unit where the fuel is further heated up before being atomized at the nozzle.

The Examiner additionally rejected Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over the Yamaguchi, et al. reference in view of the Gruenwald reference and further in view of the Wada, et al. reference. In setting forth this rejection, the Examiner cited the Wada, et al. reference for disclosing a burner having a liquid fuel tank with a liquid fuel level sensor and a control system that responds to the output of the sensor.

As newly-amended independent Claim 1 now more clearly recites, Applicant's claimed control device for controlling hydrogen flow includes among its combination of features a heating device that has a coiled pipe disposed adjacent to the hydrogen storage canister. As independent Claim 1 also now more clearly recites, the coiled pipe is "on an inner surface of said canister containing member." As stated by Applicant in the Specification, one of the purposes and objectives of the subject Patent Application is to provide a heating device that can heat hydrogen storage canisters efficiently in a short time; this purpose being achieved by the claimed orientation of elements.

The full combination of these and other features now more clearly recited by Applicant's pending Claims is nowhere disclosed by the cited references. Note in this regard that the catalyst combustor 9 of the Yamaguchi, et al. reference is not

positioned within the inner space of the canister containing chamber. Even beyond this, the Yamaguchi, et al. reference fails to disclose or suggest a heating device that includes a coiled pipe disposed adjacent to the storage canister on an inner surface of the canister containing chamber. Furthermore, the Examiner has equated both the catalytic combustor 9 of the Yamaguchi, et al. reference to the canister containing chamber (the Examiner has labeled this 9 even though the Yamaguchi, et al. reference clearly shows the catalytic combustor designated as element 9) wherein such is actually not a chamber to hold hydrogen canisters.

While Yamaguchi, et al. does disclose a catalytic combustor, it is not clear whether the references concerned with an improved and efficient heating mechanism for hydrogen canisters. It seems that the thrust of the Yamaguchi, et al. reference is for a controller for a fuel injector used in a vehicle.

The Gruenwald reference discloses a device for dispensing hydrogen having individual modules 14, 15, 16 and 17 all connected to a gas connection 10 via gas lines 20. However, the Gruenwald reference does not disclose or suggest a coiled pipe disposed adjacent to the hydrogen storage canister on an inner surface of the canister containing chamber. In the Gruenwald system, there are individual heating units 18, such as, electric heaters, that are connected to a power supply to heat the individual modules 14, 15, 16 and 17. Whereas, Applicant teaches heating fuel, with a pre-heater, which travels through the coiled pipe and heats the hydrogen gas in the canisters. This fuel is also combined to generate hot gas by the

catalyst bed for further heating of the hydrogen in the canisters. Thus, the system taught by Applicant allows for the improved and efficient heating of the hydrogen canisters.

Given such deficient teachings of the Yamaguchi, et al. and Gruenwald references, the secondarily-cited Foust and Wada, et al. references are found to be quite ineffectual to the present patentability analysis. The secondarily-cited Foust reference was cited for disclosing a pre-heater 167 but also a pipe 42, 44. However, the Foust system discloses an oil combustion system which uses a circulating oil supply line 42 and a circulating oil return line 44. Such are not actually coiled pipes disposed adjacent to the hydrogen canisters nor are they meant to pre-heat the hydrogen canisters thus enhancing the heating effect. The Wada, et al. reference was cited for disclosing an isolated feature, but fails to sufficiently remedy the deficiencies of the Yamaguchi, et al., Gruenwald and Foust references.

It is respectfully submitted, therefore, that the Yamaguchi, et al., Gruenwald, Foust and Wada, et al. references, even when considered together, fail to disclose the unique combination of elements now more clearly recited by Applicant's pending Claims for the purposes and objectives disclosed in the subject Patent Application.

The other references cited by the Examiner but not used in the rejection are believed to be further remote from Applicant's claimed system when patentability

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considerations are taken properly into account.

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

If there are any charges associated with this filing, the Honorable Commissioner for Patents is hereby authorized to charge Deposit Account #18-2011 for such charges.

Respectfully submitted,  
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